

REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons that follow. Claims 1-15 and 20-24 were pending in this application and have been rejected. With this Reply and Amendment, Claims 20-22 have been amended, and no new matter has been added. Therefore, Claims 1-15 and 20-24 will remain pending in this application upon entry of this Reply and Amendment.

Claim Rejections – 35 U.S.C. § 103

In Section 4 of the Office Action, the Examiner rejected Claims 1-15 and 20-24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,558,950 titled “Optimized Cell Pack for Large Sealed Nickel-Metal Hydride Batteries” to Ovshinsky et al. (“Ovshinsky”) in view of GB Patent No. GB2026761A titled “Accumulator Terminal Assemblies” to Schafer (“Schafer”) and U.S. Patent Application No. 2002/0070215 titled “Collapsible Container with Closed, Multi-Paneled Sidewalls” to Walsh et al. (“Walsh”). Applicants respectfully traverse this rejection.

Claim 1 is in independent form and recites a “rechargeable battery” comprising, in combination with other elements, a “sealing element comprising a supporting surface which lies flat against the housing wall at an interface.” Claims 2-15 depend from independent Claim 1.

Claim 20 is in independent form and recites a “rechargeable battery” comprising, in combination with other elements, a “sealing element provided in the at least one aperture of the housing wall and comprising a supporting surface which lies flat against the housing wall at an interface.” Claims 21-24 depend from independent Claim 20.

Applicants submit that one of ordinary skill in the art would not combine the teachings of Ovshinsky with Schafer and Walsh. In fact, Ovshinsky teaches away from such a combination. “When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” See KSR International

Co. v. Teleflex, Inc., 127 S. Ct. 1727, 1740 (2007) (referring to United States v. Adams, 383 U.S. 39, 40 (1966)). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the application.” See Ricoh Co., Ltd. v. Quanta Computer Inc., 550 F.3d 1325, 1332 (Fed. Cir. 2008) (quoting In re Kahn, 441 F.3d 977, 990 (Fed. Cir. 2006)).

Ovshinsky discloses (at col. 6, line 59-col. 7, line 2) the pitfalls of using a plastic battery case:

Heat becomes a particular problem in sealed Ni-MH prismatic cells having ... a plastic case. Recent analysis of such cells found that the heat generated during overcharge is essentially trapped in the cell where temperatures can reach 80° C. In Ni-MH batteries, excessive heat significantly decreases the cells’ capacity, self-discharge, and charge acceptance. In addition, the cells’ life was decreased due to separator and seal degradation as well as accelerated degradation of the nickel hydroxide and metal hydride active materials.

In order to address the problems associated with such a plastic battery case, Ovshinsky advocates (at col. 7, lines 54-62) using a metal battery case:

The battery case of the present invention is preferably constructed of a metallic material such as stainless steel or aluminum. If necessary, the metallic material can be stamped, embossed, or shaped to form pressure containing surfaces that counter the internal pressure of the sealed battery and thus prevent bulging of the case. Bulging is detrimental to individual batteries because it alters the electrolyte distribution and spatial orientation of the electrodes and separators.

One of ordinary skill in the art, upon reading the full teachings of Ovshinsky, would not make the combination of Ovshinsky, Schafer, and/or Walsh. Schafer teaches that the “casing 3 and the cover 2 are of thermoplastics material.” See Schafer at page 1, lines 49-50. Walsh, while being non-analogous art, also discloses a plastic material: “Preferably, the various

components of the container are manufactured at least in part by injection-molding of a thermoplastic material.” See Walsh at paragraph [0034].

As stated in MPEP § 214.02 III, “A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It is therefore impermissible to pick and choose from one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. See Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443 (Fed. Cir. 1986).

Here, the fact that Ovshinsky discloses (at Table 2) a “comparison cell” having a “plastic case” and a “plastic top” has been taken out of context. Instead, the full disclosure of Ovshinsky teaches that a “metallic material such as stainless steel or aluminum” is needed in order to address the problems associated with using plastic material. See Ovshinsky at col. 7, lines 54-56 and Table 2. Thus, Ovshinsky teaches away from using a plastic material as taught by Schafer and Walsh.

Applicants also submit that one of ordinary skill in the art would not combine the teachings of Walsh with Ovshinsky and Schafer. In fact, as noted above, Walsh represents non-analogous art, and cannot be used to form a prima facie case of obviousness. See MPEP § 2141.01(a) I. Furthermore, Walsh does not contribute any suggestion or motivation for one of ordinary skill in the art to solve the technical problem underlying the present invention (e.g., the specific problems associated with sealing batteries). Therefore, one of ordinary skill in the art would not look to Walsh in order to solve the technical problem underlying the present invention.

One of ordinary skill in the art would not combine the teachings of applications from such disparate technology areas as a “battery” (i.e., Ovshinsky and Schafer) and a “collapsible container” (i.e., Walsh). The only mention of the word “battery” in Walsh is in line four of

paragraph [0037]: “a battery of 2-4, often 6-9 or more, hinges.” The word “battery” in Walsh is used to mean a “group” or “plurality” (of hinges).

The requirements of batteries are obviously very different to the requirements of collapsible containers. For example, batteries require a high degree of sealing in order to avoid leaking electrolyte, which often has a very low viscosity. For this reason, the welding joints of the battery are important and must be leak-tight. Even the smallest pores within the welding joint would provide a leakage path for the electrolyte, increasing the risk of an explosion. In addition, the welding joint has to withstand the mechanical loads which are applied to the poles of the battery during use of the battery. Therefore, one of ordinary skill in the art has no reason or motivation to consider the “collapsible container” of Walsh for improving a battery, because Walsh does not address the specific problems associated with sealing batteries.

Applicants further submit that the rejection of Claims 1-15 and 20-24 is improper because Ovshinsky, Schafer, and/or Walsh fail to disclose at least one element of each of the rejected claims. In particular, Ovshinsky, Schafer, and/or Walsh fail to disclose a “sealing element comprising a supporting surface which lies flat against the housing wall at an interface” as recited in independent Claim 1, and a “sealing element provided in the at least one aperture of the housing wall and comprising a supporting surface which lies flat against the housing wall at an interface” as recited in independent Claim 20 (underlining added for emphasis).

On page 3 of the Office Action, the Examiner specifically acknowledged that Ovshinsky does “not disclose a plastic sealing element ...” Therefore, Ovshinsky can not possibly disclose a “sealing element” having a “supporting surface which lies flat against the housing wall at an interface” as recited in independent Claims 1 and 20.

Walsh, as non-analogous art, also does not disclose a “sealing element” having a “supporting surface which lies flat against the housing wall at an interface” as recited in independent Claims 1 and 20.

Schafer also does not disclose a “sealing element” having a “supporting surface which lies flat against the housing wall at an interface” as recited in independent Claims 1 and 20. Instead, Schafer discloses an “opening 16 in the cover 2” that is “surrounded by a welding neck 7, which is complementary to the welding neck 6 on the plastics portion 5.” See Schafer at page 1, lines 73-75.

The “welding neck 7” of Schafer does not allow the “plastics portion 5” to lie “flat against the housing wall” (as recited in Claims 1 and 20). Instead, the “welding neck 7” is a projection that extends away from the “cover 2,” creating a space between the “cover 2” and the “plastics portion 5” of Schafer.

According to, for example, paragraph [0014] of the present application, the present invention has the advantage of not creating such a space:

The welding of the supporting surface of the plastic sealing element to the housing wall by means of a weld bead on the contact surface between the supporting surface and the housing wall instead of the weld bead, which is produced in conventional hot-tool welding, to the outer edge furthermore has the advantage that no dead space is required and the plastic sealing element can be welded to the housing wall only by means of the transmission laser welding method, for manufacturing reasons.

Therefore, the “rechargeable battery” recited in independent Claims 1 and 20 would not have been obvious in view of Ovshinsky, alone or in any proper combination with Schafer and/or Walsh under 35 U.S.C. § 103(a). Ovshinsky, alone or in any proper combination with Schafer and/or Walsh does not disclose, teach, or suggest a “rechargeable battery” comprising, in combination with other elements, a “sealing element” having a “supporting surface which lies flat against the housing wall at an interface” as recited in independent Claims 1 and 20.

To transform the “optimized cell pack for large sealed nickel-metal hydride batteries” of Ovshinsky, the “accumulator terminal assemblies” of Schafer, and the “collapsible container with closed multi-paneled sidewalls” of Walsh into a “rechargeable battery” (as recited in Claims 1

and 20) would require still further modification, and such modification is taught only by the Applicants' own disclosure. Of course, any reliance on the Applicants' own disclosure to make the combination of Ovshinsky, Schafer, and/or Walsh would constitute hindsight reasoning, which is improper.

The "rechargeable battery" recited in independent Claims 1 and 20, considered as a whole, would not have been obvious in view of Ovshinsky, Schafer, and/or Walsh. Therefore, independent Claims 1 and 20 are patentable over Ovshinsky in view of Schafer and/or Walsh. Dependent Claims 2-15, which depend from independent Claim 1, and Claims 21-24, which depend from independent Claim 20, are also patentable. See 35 U.S.C. § 112 ¶ 4.

Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-15 and 20-24 under 35 U.S.C. § 103(a).

* * *

It is submitted that each outstanding objection and rejection to the Application has been overcome, and that the Application is in a condition for allowance. Applicants request consideration and allowance of all pending claims.

It should also be noted that although the Applicants have only addressed certain claims or claimed features herein, other claims, features, or combinations of features may also be patentable for additional reasons. Further, the failure to address any statement by the Examiner should not be interpreted as acquiescence or agreement with such statement. Applicants expressly reserve the right to rebut any statement presented by the Examiner and to set forth additional and/or alternative reasons for patentability during prosecution of the present Application or in any other future proceeding.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorize payment of any such extension fees to Deposit Account No. 19-0741.

Respectfully submitted,

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